

FIGURE 1

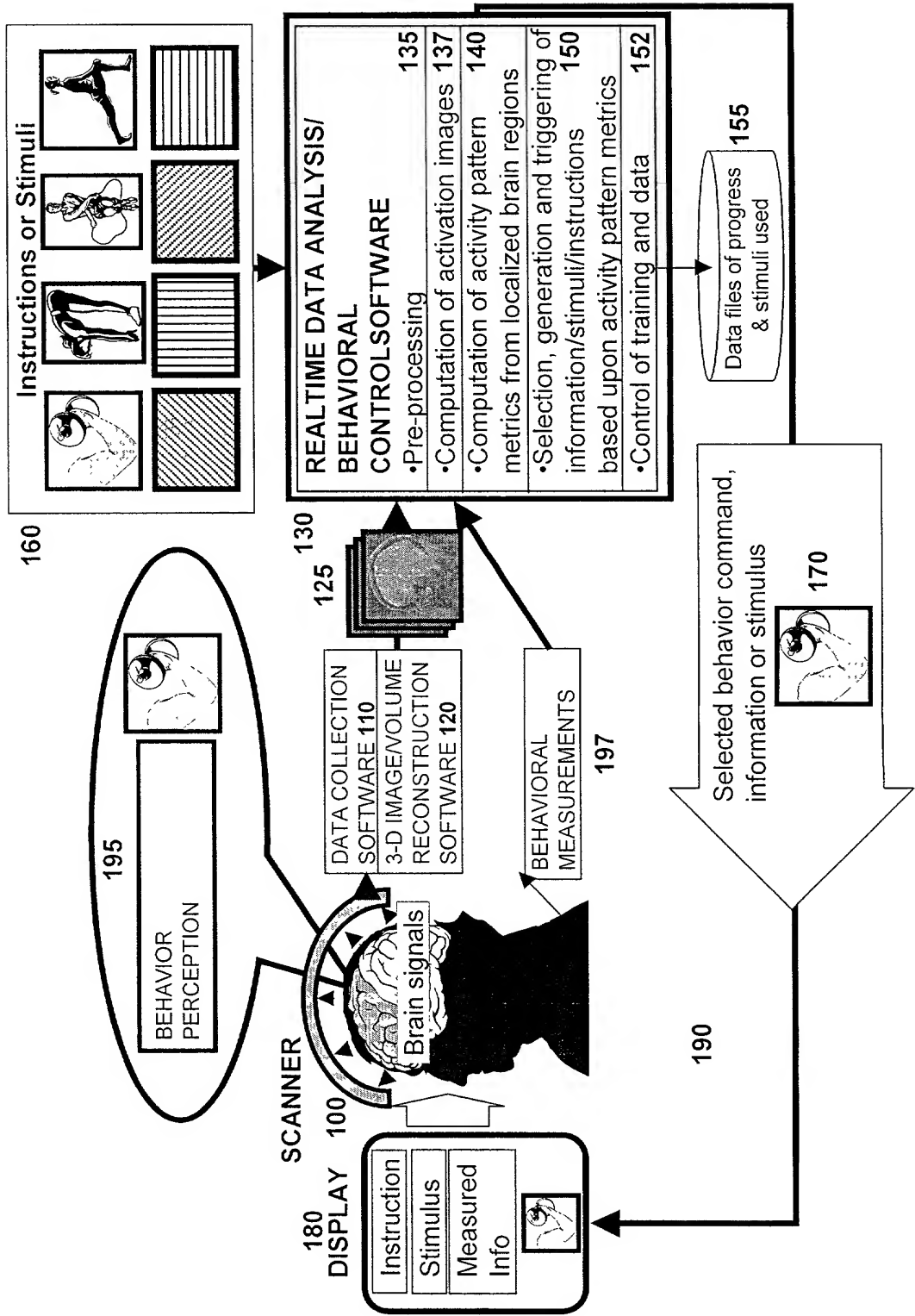


FIGURE 2

| | | | |
|---|-------------------------------------|--|-------------------------------|
| FOREBRAIN | | | |
| Diencephalon | Parietal lobe | | Cochlear nuclei |
| Subthalamus | Frontal lobe | | Medullary reticular formation |
| Zona incerta | Cerebral white matter | | Solitary nucleus |
| Subthalamus | Anterior commissure | | Inferior olivary complex |
| Hypothalamus | Internal capsule | | Vestibular nuclei |
| Intermediate hypothalamic region | Corpus callosum | | Metencephalon |
| Hypophysis | Basal ganglia | | Cerebellum |
| Adenohypophysis | Amygdala | | Deep cerebellar nuclei |
| Neurohypophysis | Globus pallidus | | Dentate nucleus |
| Thalamus (including all sub-divisions) | Striatum | | Fastigial nucleus |
| Metathalamus | Substantia Nigra | | Globose nucleus |
| Medial geniculate body | (pars compacta and pars reticulata) | | Emboliform nucleus |
| Lateral geniculate body | Caudate nucleus | | Cerebellar cortex |
| Epithalamus | Putamen | | Flocculonodular lobe |
| Habenula | Septum | | Posterior lobe |
| Pineal body | Fornix | | Vermis of posterior lobe |
| Telencephalon | Olfactory bulb | | Anterior lobe |
| Cerebral cortex including all 47 areas as described by Brodmann | MIDBRAIN | | Pons |
| Archicortex | Cerebral Peduncle | | Basal part of pons |
| Hippocampal formation | Substantia nigra | | Pontine nuclei |
| Hippocampus | Midbrain tegmentum | | Pontine tegmentum |
| Dentate gyrus | Midbrain reticular formation | | Pontine reticular formation |
| Subiculum | Red nucleus | | Superior olivary complex |
| Parahippocampal gyrus | Oculomotor nuclei | | Locus ceruleus |
| Cingulate gyrus | Tectum | | |
| Occipital lobe | Inferior colliculus | | |
| Temporal lobe | Superior colliculus | | |
| Insula | Pretectal region | | |
| | HINDBRAIN | | |
| | Medulla oblongata | | |

A more complete list is available in cited neuroanatomical texts.

FIGURE 3

| | | | | |
|--|--------------------------------|-------------------------------------|-----------------------------|------------------------|
| Alzheimer's Disease | Chronic Pain | Lateral Medullary | Obesity | Spinal Cord Injury |
| Amyotrophic Lateral Sclerosis | Chronic Regional Pain Syndrome | Syndrome | Occipital Neuralgia | Spinal Cord Tumors |
| Anxiety Disorders | Cns Trauma | Learning Disabilities | Overuse Syndrome | Stroke |
| Aphasia | Cushing's Syndrome | Leigh's Disease | Pain - Chronic | Sturge-Weber Syndrome |
| Apraxia | Dandy-Walker Syndrome | Lewy Body Dementia | Paresthesia | Tardive Dyskinesia |
| Asperger Syndrome | Dementia - Multi-Infarct | Lissencephaly | Parkinson's Disease | Tay-Sachs Disease |
| Attention Deficit-Hyperactivity Disorder | Dementia With Lewy Bodies | Locked-In Syndrome | Parkinson's Disease | Temporal Arteritis |
| Autism | Depression | Lou Gehrig's Disease | Parmyotonia | Tic Douloureux |
| Autonomic Dysfunction | Diabetic Neuropathy | Lupus - Neurological | Congenita | Tourette Syndrome |
| Back Pain | Diffuse Sclerosis | Sequelae | Parry Romberg | Traumatic Brain Injury |
| Bell's Palsy | Dysgraphia | Lyme Disease - | Peripheral Neuropathy | Tremor |
| Bipolar Disorder | Dyslexia | Neurological Sequelae | Pervasive | Trigeminal Neuralgia |
| Brain and Spinal Tumors | Dystonias | Meningitis | Disorders | Wallenberg's Syndrome |
| Brain Aneurysm | Encephalitis and Meningitis | Migraine | Pick's Disease | Zellweger Syndrome |
| Brain Injury | Epilepsy | Mini-Stroke | Pinched Nerve | |
| Carpal Tunnel Syndrome | Epilepsy | Motor Neuron Diseases | Pituitary Tumors | |
| Causalgia | Friedreich's Ataxia | Multiple Sclerosis | Postherpetic Neuralgia | |
| Central Pain Syndrome | Gaucher's Disease | Muscular Dystrophy (MD) | Repetitive Motion Disorders | |
| Cerebral Aneurysm | Guillain-Barre Syndrome | Myasthenia Gravis | Repetitive Stress Injuries | |
| Cerebral Arteriosclerosis | Head Injury | Myoclonus | Restless Legs Syndrome | |
| Cerebral Palsy | Headache | Myopathy | Rett Syndrome | |
| Charcot-Marie-Tooth Disorder | Herpes Zoster | Myotonia Congenita | Schizophrenia | |
| Chiari Malformation | Huntington's Disease | Narcolepsy | Seizure Disorder | |
| Chorea | Hydrocephalus | Neurofibromatosis | Shingles | |
| | Landau-Kleffner Syndrome | Neurological Manifestations of AIDS | Sleep Apnea | |
| | | Neuronal Migration Disorders | Sleep Disorders | |
| | | Niemann-Pick Disease | Spasticity | |
| | | | Spina Bifida | |

FIGURE 4

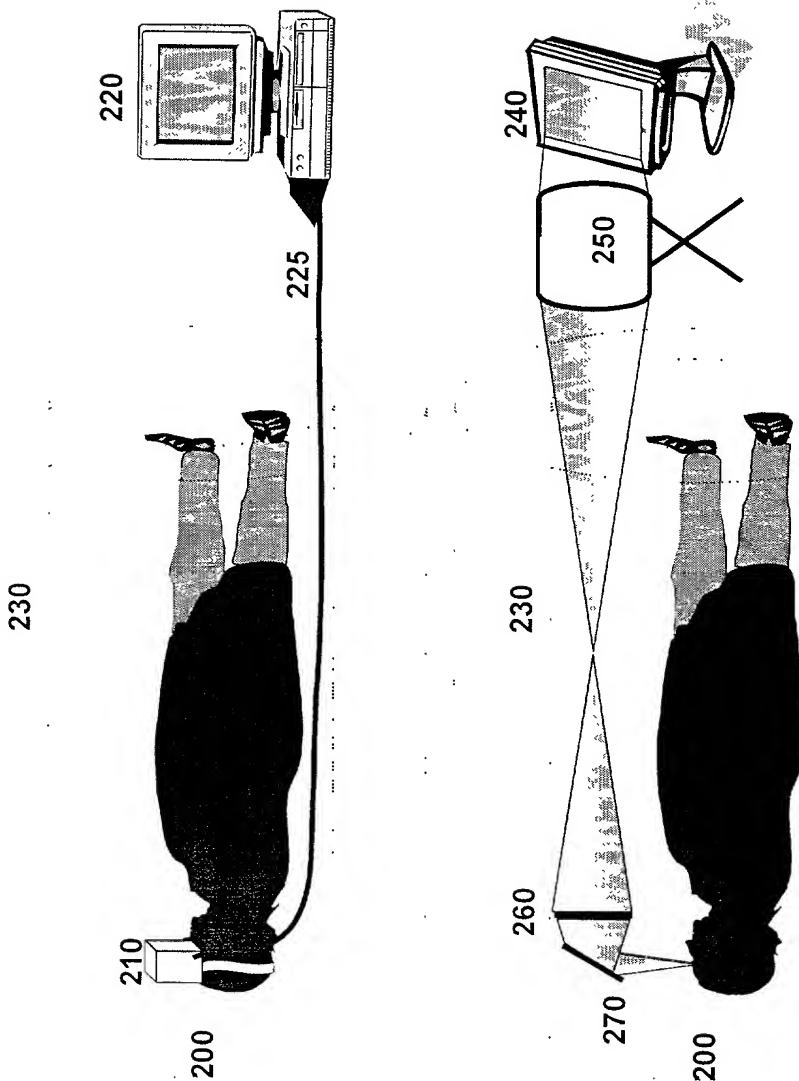


FIGURE 5

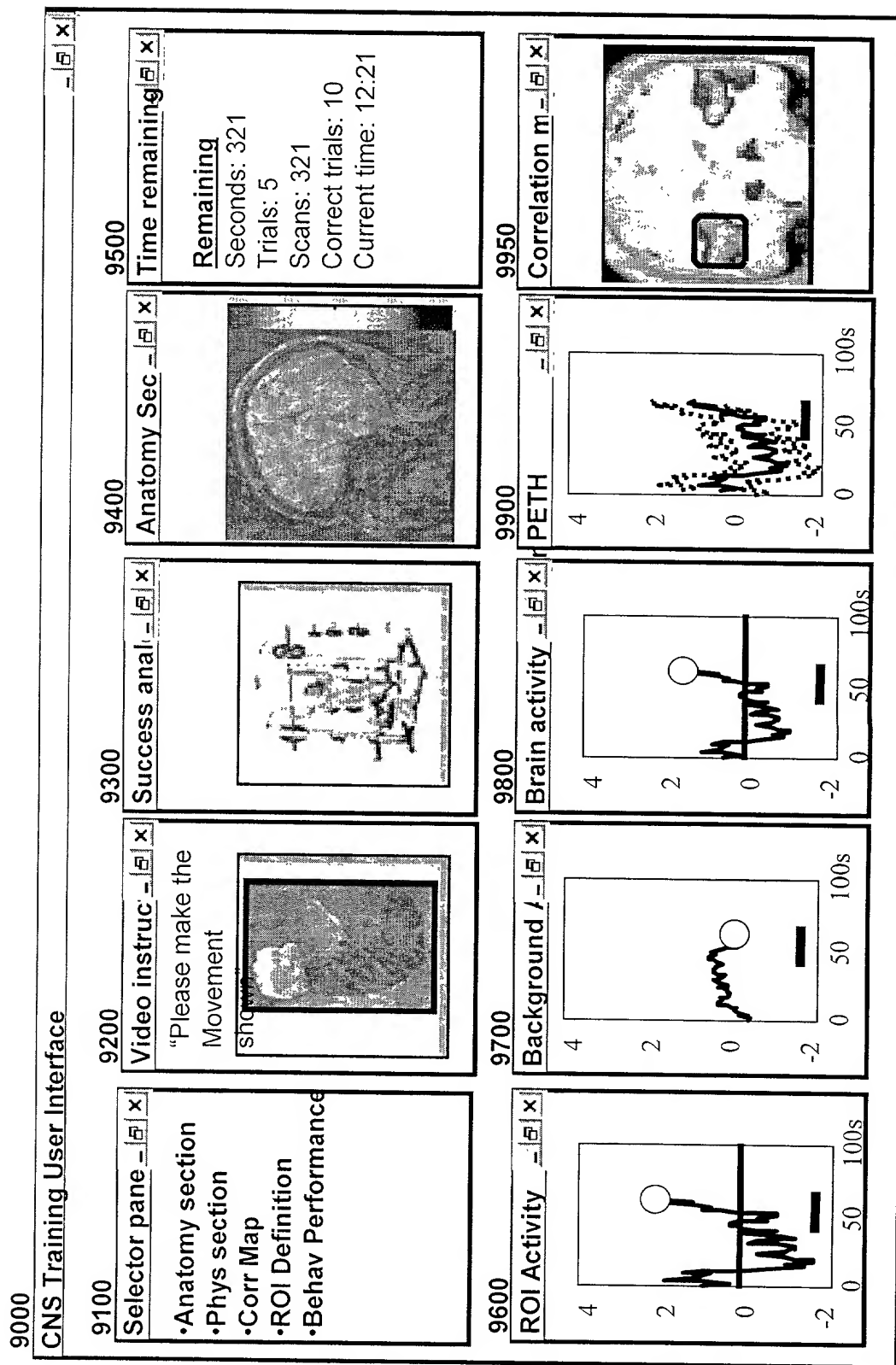


FIGURE 6

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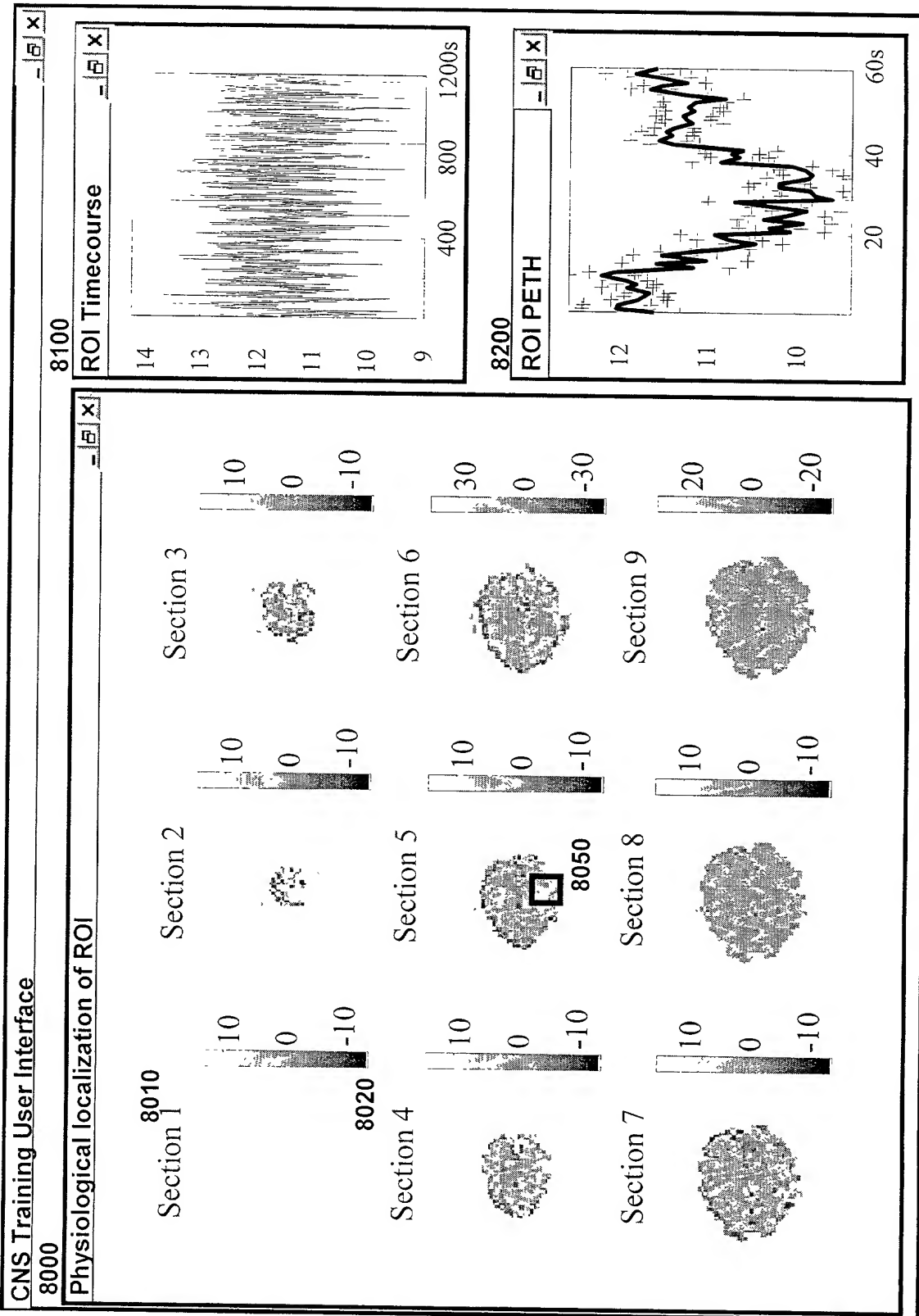


FIGURE 7

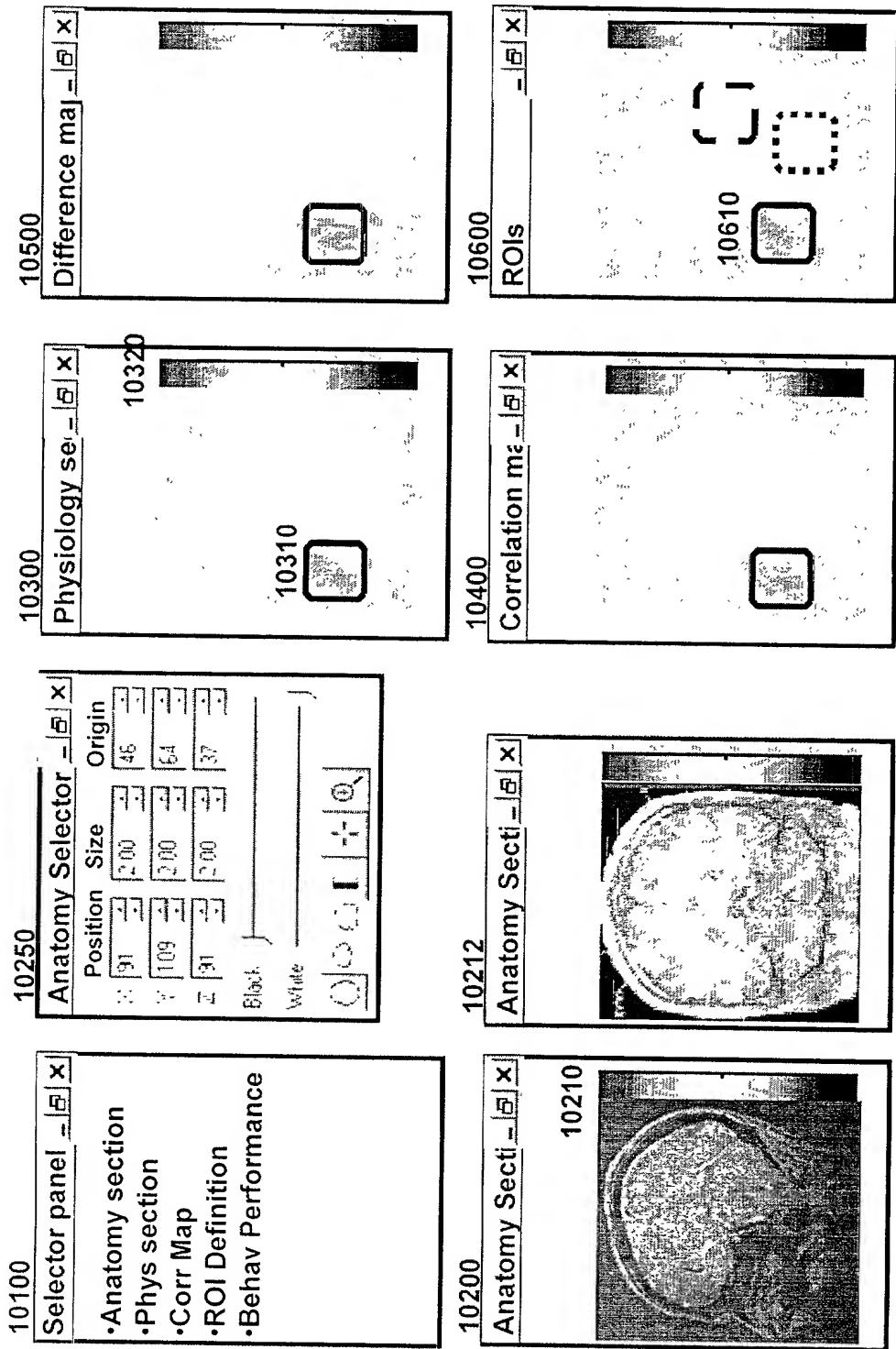


FIGURE 9

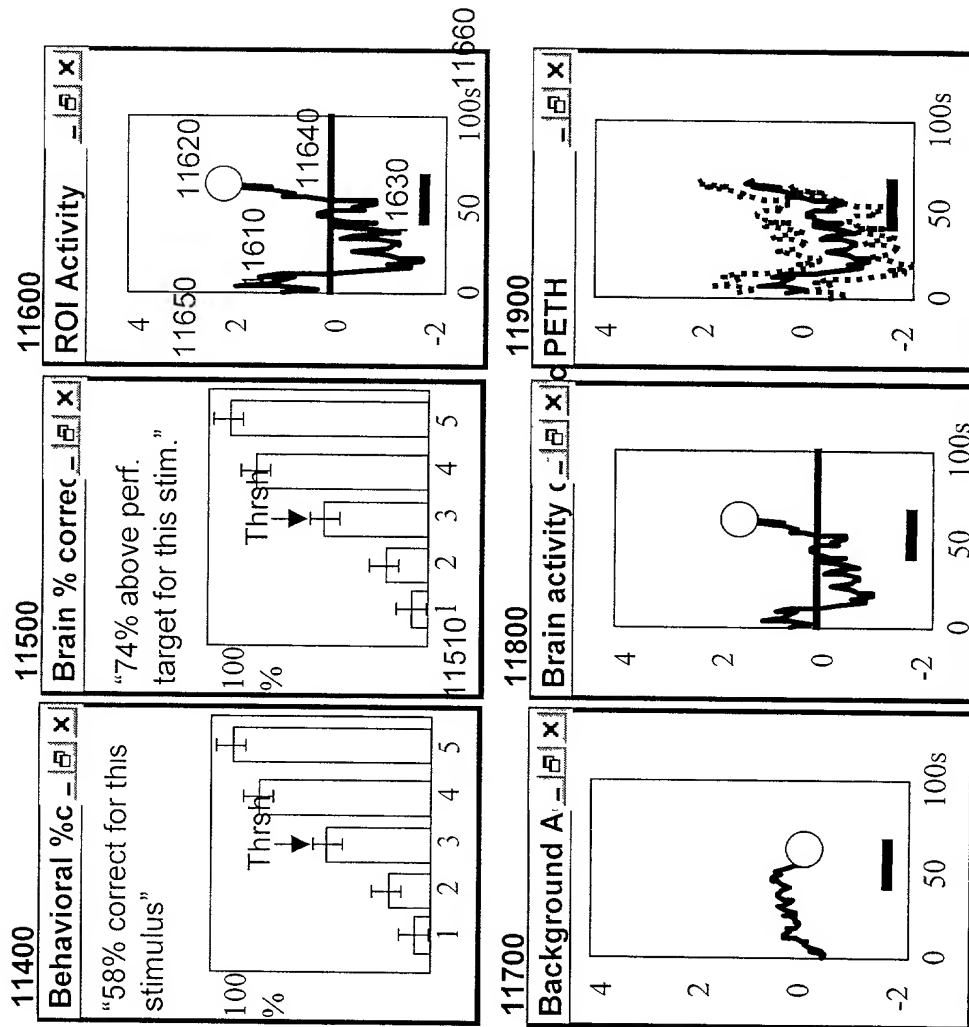


FIGURE 10

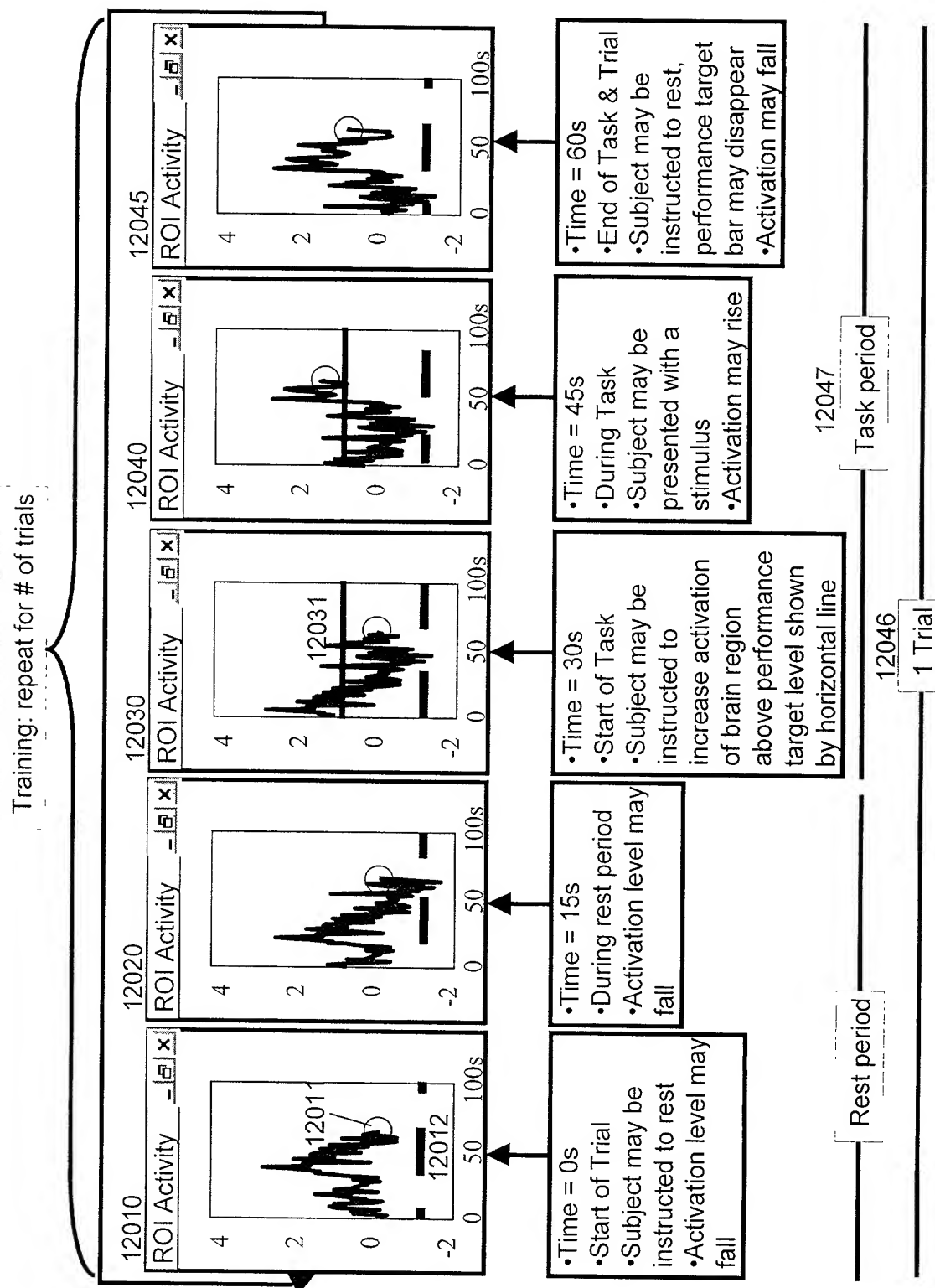


FIGURE 11

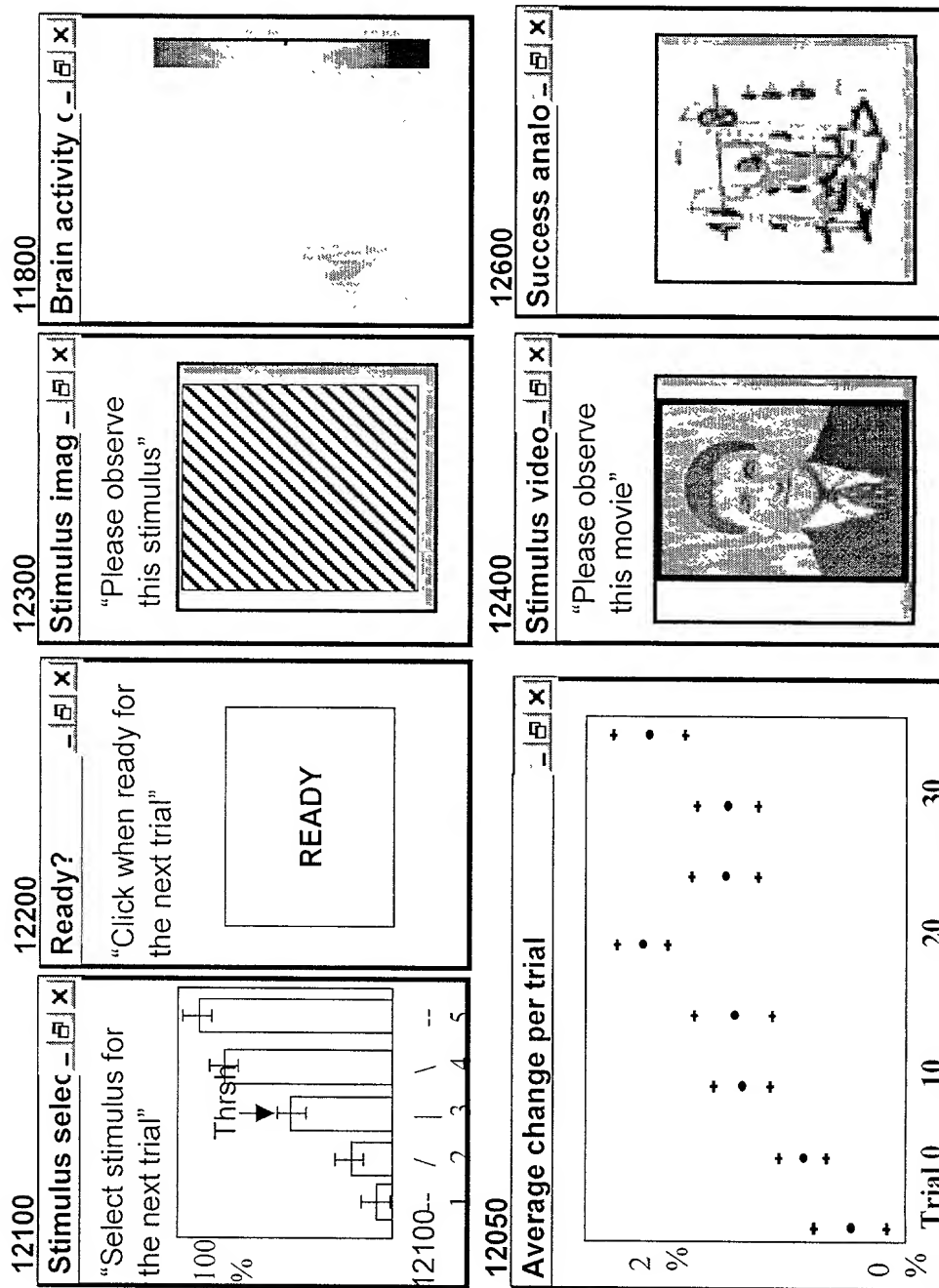


FIGURE 12

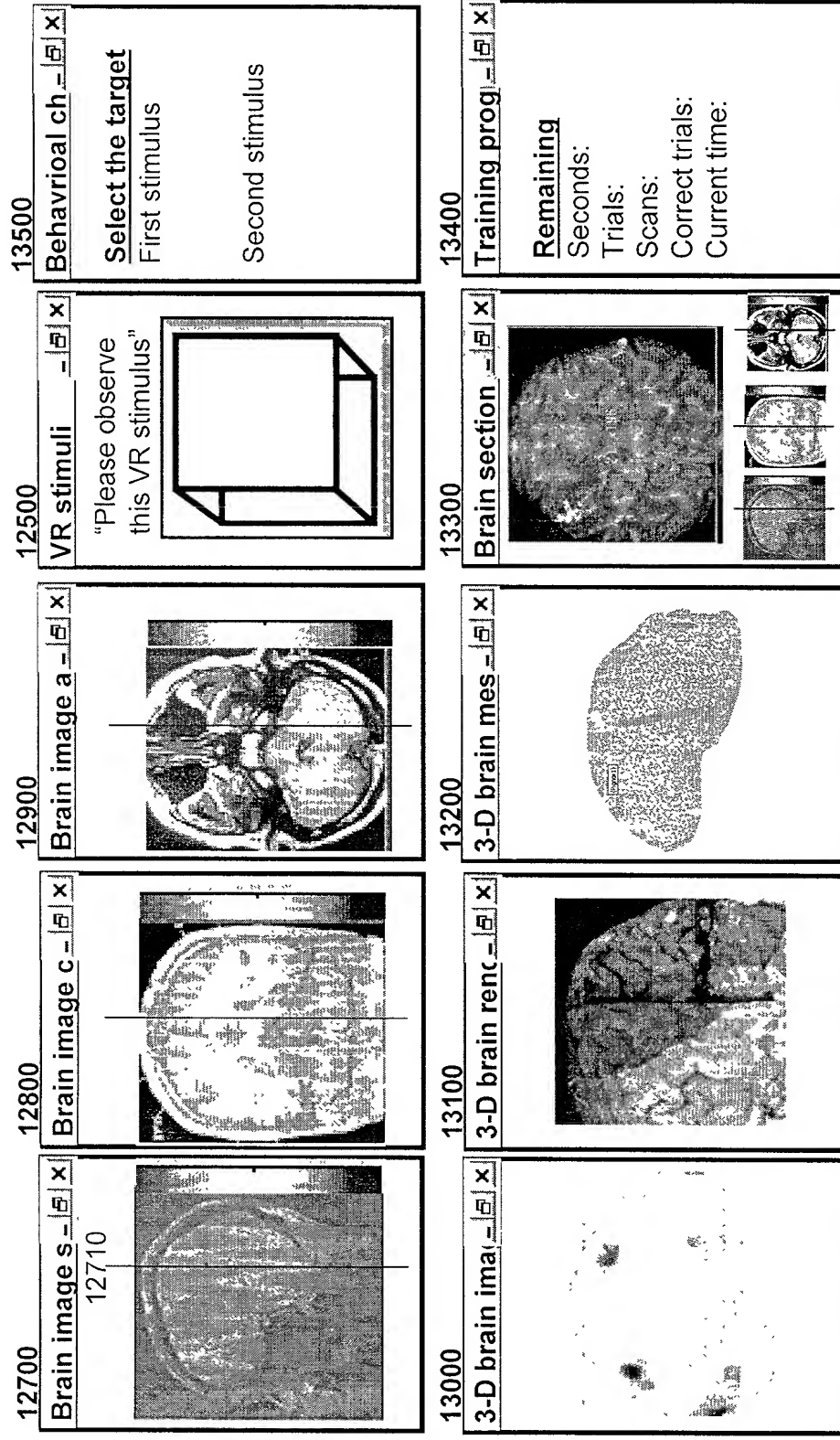


FIGURE 13

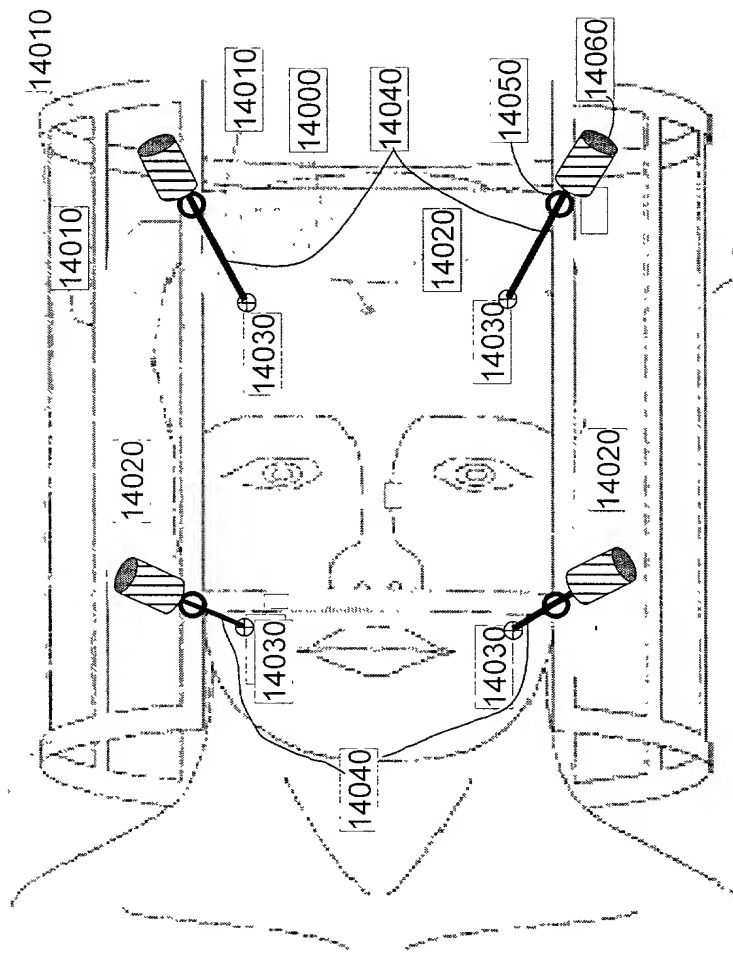


FIGURE 14

| Region | Coords. | Condition | Neuro-modulator |
|---|------------------|---------------------------|-----------------|
| subthalamus | X=+10 Y=-13 Z=-4 | PD | - |
| substantia nigra | X=+10 Y=-17 Z=-8 | PD, Schz | DA |
| thalamus | X=+10 Y=-5 Z=8 | PD | - |
| nucleus accumbens | X=+10 Y=7 Z=-8 | SA, Rew, Schz | DA |
| thalamus VL ventrolateral | X=+14 Y=-11 Z=8 | PD | - |
| globus pallidus internus | X=+15 Y=-2 Z=-4 | PD | - |
| pulvinar nucleus | X=+15 Y=-27 Z=4 | ADD | - |
| thalamus VP | X=+17 Y=17 Z=9 | Pain | - |
| locus coeruleus | X=+2 Y=-31 Z=-14 | ADD, SA, Rew | NA |
| globus pallidus externus | X=+20 Y=-2 Z=-4 | PD | - |
| amygdala | X=+22 Y=-5 Z=-12 | Pain | - |
| medial frontal lobe | X=+3 Y=14 Z=40 | Pain | - |
| periaqueductal gray matter | X=0 Y=-26 Z=-12 | Pain | - |
| raphe dorsalis | X=+2 Y=-30 Z=-12 | Pain | opiates |
| nucleus basalis of Meynert | X=+4 Y=1 Z=-12 | AD, learning & plasticity | 5-HT |
| dorsolateral pre-frontal cortex | X=+28 Y=34 Z=35 | Dep | Ach |
| anterior pre-frontal cortex | X=+17 Y=64 Z=16 | Dep | - |
| rostral ventromedial medulla | X=2 Y=-28 Z=-28 | Pain | opiates |
| nucleus raphe magnus | X=2 Y=-30 Z=-28 | Pain | 5-HT, opiate |
| thalamus Vim ventrointeromedial | X=+7 Y=-12 Z=4 | PD | - |
| Brodman's areas 4 | X=+48 Y=-15 Z=40 | Motor impairments | - |
| Brodman's areas 6 | X=59 Y=-9 Z=40 | Motor impairments | - |
| PD - Parkinson's disease; AD - Alzheimer's disease; ADD - attention & attention deficit/attention deficit/hyperactivity disorder, Dep - depression/mood/affect, SA - substance abuse & addiction, Schz - schizophrenia, Rew - reward DA - dopamine, 5-HT - serotonin, Ach - acetyl choline, NA - noradrenaline | | | |